

VOLUME 24 • NUMBER 1 • JANUARY 2001

OCCUPATIONAL

# Health & Safety

MAGAZINE

A black and white X-ray image of two hands, palms facing each other, showing the skeletal structure of the fingers, wrists, and forearms. The image is used as a background for the magazine cover.

musculoskeletal injuries  
clerks feel the  
**pain**

## Training Young Workers to Avoid

# At-Risk Behaviour

by Marilyn Buchanan



**W**hy are young people more vulnerable to injury on the job? Most often, the actions young people take that endanger them are put down to lack of experience, lack of training or poor attitude. "They make bad choices," we say of everything from their driving to sexual behaviour.

The facts are not palatable: young workers are far more likely to be injured or killed on the job than older workers. In 1999, 24.6 per cent of Workers' Compensation Board - Alberta claimants were 24 years of age and younger.

Typically, our response is to shake our heads and ask, "Why don't they just smarten up?" New research shows that the answer may be quite simple ... they literally may not have the brains for it.

Researchers are finding that young people's brains may not be wired for risk assessment. They simply don't have the ability to assign significance or importance to stimuli in their environment.

This means employers who hire young workers need to take a good look at their training programs for those in the 15- to 24-year-old age range. Unfortunately, many safety training programs are designed for mature workers, and are not effective when applied to younger members of the workforce.

Training must be designed to help young people develop their deductive reasoning and decision-making skills, and their coping strategies.

### Research findings

Sandra Witelson, a neuroscientist at McMaster University, has found that during adolescence and early adulthood the brain's hardware is not completely connected. Recent MRI (magnetic resonance imaging) testing and other research show that the brain of a person between 16 and 24 still has a good deal of developing to do. In addition, the nerve pathway between the left and right sides of the brain is continuing to develop circuitry for comparative and abstract thinking.

We are born with all the brain cells we will ever have. What develops over time are the connections between those cells. Until these connections develop fully, a person is likely to engage in impulsive and risky behaviour.

While the connections are developing, the brain's electrical wiring doesn't transfer information effectively. This interferes with information feedback between the other parts of the brain and the prefrontal cortex.

The prefrontal cortex is one of the last parts of the brain to mature. It is responsible for self-control, judgment, emotional regulation and planning. This region of the brain is crucial to our ability to evaluate future consequences, weigh alternatives and select behaviours.

Dr. Scott Oddie, a neuroscientist and instructor at Red Deer College, suggests that the prefrontal brain region provides an executive function: it governs our ability to engage in rational, logical and analytical thought. Those approaching adulthood may not be able to appropriately evaluate the possible outcomes of their behaviour. They react more impulsively to the demands of their environment, without concern for the consequences. In addition, they lack experience, which can provide feedback on the basis of previous learning.

Adolescents are just beginning to develop the ability to envision different options and weigh alternative behaviours. They often perceive no relationship between themselves and their own actions. They overestimate their own abilities and tend to think, "It won't happen to me." In this age group, it's normal to be spontaneous and willing to take risks, and to feel invulnerable.

Learning to drive a car is a good example. Young people have the ability to master the basic skills required to control a vehicle, but their abstract thinking skills are underdeveloped, so they have difficulty assessing hazards and perceiving the possible consequences of their actions. And it seems that the development of these skills is not easy to speed up.

### Helping young workers stay alive

In view of the latest research, it comes as no surprise that young people can't make all the measured, considered responses to situations that adults would like them to. So what can we do to assist young people during this high-risk stage of life? We have to help them to see risks as real and personal threats.

Research shows that the "rules and regulations" focus of many training programs for mature workers is not effective when used with young people. Nor are posters containing veiled threats. Fear-arousing messages can affect attitudes and intentions, but they have little effect on actual behaviour.

All stakeholders — employers, learning institutions, labour groups, associations and government, and not least, parents — can learn from the research and work together to train young workers to avoid at-risk behaviour.

*Marilyn Buchanan, CRSP, is currently studying social psychology at Red Deer College. This article follows from a research paper she completed as part of a Brain and Behaviour course.*

**Read more about training young workers on page 19.**

# OCCUPATIONAL Health & Safety MAGAZINE

A Workplace Health and Safety  
Alberta Human Resources and Employment publication

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Occupational Health & Safety Magazine is published three times a year, in January, May and September. Magazine policy is guided by the Occupational Health & Safety Magazine Advisory Board consisting of industry and government representatives.

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Subscriptions to Occupational Health & Safety Magazine are available without charge. When notifying us of a change of address, send an address label or subscription number with the new address.

**Letters to the Editor** We welcome response to articles or information published in this magazine, as well as suggestions for future articles. We will print letters to the editor as space permits. The editor reserves the right to edit letters.

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## Occupational Health & Safety Magazine

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**1-866-415-8690**

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Design and layout by McRobbie Design Group Inc.  
Publication Mail Agreement No. 1528572  
ISSN 0705-6052 © 2001

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## New Initiatives at Workplace Health and Safety

### 1 The WHS Call Centre: Instant access to oh&s help!

Early in 2001, Workplace Health and Safety (WHS) launches its first toll-free call centre. For employers, employees or any member of the public, the centre's staff is ready with answers to your questions about occupational health and safety.

Call to:

- ask general occupational health and safety questions
- get explanations of the *Occupational Health and Safety Act* and its regulations
- request Workplace Health and Safety's publications
- lodge health and safety complaints about work conditions
- notify the department about workplace fatalities or serious incidents

Four trained staff answer the centre's phones between 8:15 a.m. and



4:30 p.m., weekdays (excluding statutory holidays). For after-hours emergencies, an answering service will put callers in touch with a designated WHS officer.

**Call 1-866-415-8690  
for answers to your  
oh&s questions!**

### WHS (and *Occupational Health & Safety Magazine*) goes global! Look us up at [www.whs.gov.ab.ca](http://www.whs.gov.ab.ca)

Workplace Health and Safety now has its own Web site. Designed to pass along important occupational health and safety information, it is also set up to respond to your needs and requests. The site is interactive. You can take the Safety Challenge quiz or send an oh&s question via the Ask an Expert page. Regulations, publications, approved training agencies, fatality reports, and

information about the Partnerships program are readily accessible. You'll also find links to other important oh&s sites.

To find *Occupational Health & Safety Magazine* on the WHS Web site, look under Publications on the home page. The complete magazine is provided in a pdf downloadable file.

### WHS keeps pace with economic expansion

WHS is increasing its complement of occupational health and safety officers by 10 per cent, to 64. The additional six positions are needed to keep up with the increased industry activity Alberta is experiencing, said Alberta Human Resources and Employment Minister Clint Dunford, when he announced the new positions in December 2000.

The number of work site inspections performed by Workplace Health and Safety officers doubled from 2,769 in all of 1999, to 5,126 by October 2000. With a larger team of officers out in the field throughout the province, Alberta employers and employees can expect more safety inspections at their workplaces.

### What works for you . . . might work for others!

**D**o you run a small business? And have you found creative ways of improving health and safety at your workplace? We want to hear about your practices, training methods, equipment modifications and management concepts — anything that's provided you with a solution to a health and safety issue.

Here's your chance to make a difference to health and safety at work sites across the province — urban and rural, office or oil lease.

Tell us your story and we'll pass it along to our readers. Send your story to:  
[eric.reitsma@gov.ab.ca](mailto:eric.reitsma@gov.ab.ca)

### Because work shouldn't hurt!

**RSI**

February 28, 2001

**R**epetitive Strain Injury (RSI) is a serious occupational health concern around the world. RSIs don't discriminate; they affect a cross-section of the population engaged in a variety of occupations. Computer users are only a small portion of those who get RSIs.

February 28, 2001, marks the second annual International RSI Awareness Day. The concept evolved from a proposal sent to an e-mail discussion list by a Canadian injured worker and has spread to include participants in 12 different countries.

The purpose of International RSI Awareness Day is to raise public awareness about RSIs, to prevent others from being injured and to promote understanding and acceptance for those with RSIs. The day is being organized by an international group of volunteers representing injured workers, trade unionists, health and safety professionals and health care practitioners.

Source: [www.ctdrn.org/rsiday/](http://www.ctdrn.org/rsiday/)

# Are you thinking of hiring someone under 18?

To hire someone under 18 years of age, you must meet the conditions and restrictions laid out in the *Employment Standards Code* and *Employment Standards Regulation*. The rules under the legislation are different for hiring 12-, 13- or 14-year olds than for hiring 15-, 16- and 17-year olds.

For example, in most cases a permit will be required to hire someone in the younger age group. To find out if a permit is necessary and how to apply for a permit, call the number below. You will need to have parental or guardian consent, even if a permit is not required. Twelve-, 13- or 14-year olds:

- cannot work more than two hours on a school day
- cannot work more than eight hours on any non-school day
- are prohibited from working in any employment between 9 p.m. and 6 a.m.

To hire a 15-, 16- or 17-year old, a permit is not required. However, the legislation does place certain restrictions on their employment between 9:00 p.m. and 6:00 a.m. If you don't follow these rules:

- you are committing an offence under the *Employment Standards Code*
- the company and its owners, directors and officers who participate in the hiring are subject to prosecution and fines up to \$100,000.

If the employee is not trained and fully competent in the job, or if there are uncontrolled hazards at the work site, you may also be committing offences under the *Occupational Health and Safety Act* and its regulations.

## Call before you hire!

Before you hire anyone under 18, call Employment Standards (780) 427-3731 (toll-free by first dialing 310-0000) and ask about your legal responsibilities.

## Our Mistake

**M**eat processors in Alberta are careful to adhere to the province's safety regulations, several readers pointed out in response to the photo that appeared in "The Invisible Injury" in the September 2000 issue of this magazine. The readers objected to the photo of the meat cutter, who wasn't wearing personal protective equipment (PPE). According to Workplace Health and Safety, PPE requirements for meat cutters are task specific: different jobs require different kinds of PPE, depending on the risks involved. The meat cutter in the photo appears to be quartering a carcass, and therefore should be wearing:

- steel-toed safety footwear (usually rubber boots because of the large quantity of water, blood and tissue on the floor)
- hairnet, hard hat, safety glasses and hearing protection
- a protective smock or coveralls to keep blood, fluids and tissue away from personal clothing and the worker.
- a mesh glove on the hand opposite the knife hand
- wrist and forearm protectors on the arm opposite the knife hand
- a protective mesh, metal disc or plastic apron.

While the *Occupational Health and Safety Act* does not contain regulations specific to meat cutters, the PPE sections (82-89) in the *General Safety Regulation* would apply to these workers. It is up to the employer to determine the risks of the job and take appropriate action to protect workers from injury.

## NAOSH Week May 6 - 12, 2001

### Prevention is the Cure

Employers, employees and the general public are once again invited to participate in North American Occupational Safety and Health (NAOSH) Week. The primary purpose of this annual cooperative effort by Canada, Mexico and the United States is to raise awareness of the importance of preventing injury and illness in the workplace. This continent-wide event is an opportunity for all parties to strengthen their commitment to OHS.

For activity planning ideas, visit the Canadian Society of Safety Engineers' Web site at [www.csss.org/docs/naosh.html](http://www.csss.org/docs/naosh.html). Suggestions include:

- poster contests for employees' children
- presentations to staff by local fire departments or police
- shopping mall displays
- media kits

Promotional products (baseball caps, pens, stickers, mouse pads and more) are available for purchase through the above-noted Web site.

# Working Alone

## New regulation protects

by Allan Sheppard

**E**mployers have new responsibilities for protecting employees who work alone. Under the *General Safety Amendment Regulation – Working Alone* (known as the working alone regulation), employers must meet three practical requirements if their employees must work alone.

The definition of working alone, under the working alone regulation, is "to work alone at a work site in circumstances where assistance is not readily available in the event of an injury, illness or emergency." The new regulation requires employers to:

- assess their operations for existing and potential safety hazards and complete a written hazard assessment
- take appropriate safety measures to substantially reduce or eliminate any hazards they find
- establish a communications system or appropriate procedures so that employees working alone can contact someone who is able to respond to their needs or to an emergency situation. The communication system can be a radio, telephone, or other means of visual or physical contact.

Employers have until April 30, 2001, to comply with the new working alone regulation.

Employees also have a role. The regulation requires that, wherever possible, employers work with employees to develop a hazard assessment of their workplace that will help eliminate or control the hazards identified.

The working alone regulation, announced by Human Resources and Employment Minister Clint Dunford on October 4, 2000, grew out of a full review of the *General Safety Regulation (GSR)* begun in April 1999, when a 19-member task force began to review and update Alberta's workplace health and

safety regulations. The task force, which represents employers and employees, will complete its work on the GSR in the spring of 2001.

To complement development of the working alone regulation, Minister Dunford established another committee, called the Minister's Committee to Promote Health and Safety – Working Alone Best Practices.

The committee, chaired by Sherwood Park businessman Jon Burkinshaw, consisted of labour and industry representatives. Committee members were asked to research recognized best safety practices used by businesses across North America to make workplaces safer.

Based on their research, the committee developed a practical

**The handbook is a step-by-step guide to help employers and employees assess the safety risks of their particular business.**

handbook that provides employers and employees with the information they need to help them meet the requirements of the regulation. The handbook is a step-by-step guide to help employers and employees assess the safety risks of their particular business. It also provides recognized safety strategies and measures that will help employers reduce these risks.

The handbook, called *Working Alone Safely – A Guide for Employers and Employees*, identifies five groups of employees who may be at risk while working alone.

- Employees who handle cash: convenience store clerks, retail and food outlet employees, taxi drivers
- Employees who leave a base office to meet clients: home care and social service workers, bylaw officers
- Employees who do hazardous work and have no routine contact with

customers or the public: workers in logging, oil and gas industries

- Employees who travel alone and have no routine contact with customers or the public: truck drivers, workers in transit
- Employees at risk of violent attack because their work site is isolated from public view: security guards, custodians.


For every working alone situation covered in the handbook, employers can refer to specific checklists that will help them do hazard assessments for their businesses.

Committee member Gerry Collinge is a former Royal Canadian Mounted Police officer with 14 years of experience as loss-prevention manager at 7-Eleven Canada. Collinge shared with his colleagues the guidelines and checklists he uses to promote and maintain the health and safety of the employees in 7-Eleven's 475 stores in Canada – guidelines and checklists that reflect the experience of 7-Eleven Canada's parent company, which operates 18,000 stores around the world.

Despite the importance he attributes to these guidelines and checklists, Collinge says the critical factor in preventing robbery, violence and other hazards for people working alone is management commitment to providing a safe and healthy workplace for employees.

Workplace Health and Safety's Yan Lau, a member of the minister's committee, says the new regulation "gives employers clear guidance, with flexibility on how to achieve the result that we all want: safer working conditions. Like all Canadian occupational health and safety legislation," he adds, "Alberta's approach is based on the concept of due diligence: What would a reasonable person do in a similar situation?"

*Allan Sheppard is a freelance writer and researcher. He lives in Edmonton.*



## employees who work alone

### To find out more...

about the new working alone regulation and to obtain copies of *Working Alone Safety*, call Workplace Health and Safety at 1-866-415-8690. The handbook, which includes the new regulation, is also posted on the WHS website at [www.whs.gov.ab.ca](http://www.whs.gov.ab.ca). See also the *Workplace Health and Safety* publications:

**An Explanation of the General Safety Amendment Regulation — Working Alone (WA002)**

**New Working Alone Regulation — Questions and Answers (WA001)**

### RESOURCES

#### WEB LINKS

[www.whs.gov.ab.ca](http://www.whs.gov.ab.ca)

Links to the new Alberta working alone regulation, guidelines for employers, and questions and answers on the regulation.

[www.niehs.nih.gov/odhsb/manual/man31i.htm](http://www.niehs.nih.gov/odhsb/manual/man31i.htm)  
The NIOSH version of working alone policies.

#### IN THE ALBERTA HUMAN RESOURCES AND EMPLOYMENT LIBRARY

**Violence in the Workplace: Preventing, Assessing, and Managing Threats at Work**  
by Carol Wilkinson  
Rockville, Md.:  
Government Institutes

(HF 5549.5 E43 W54 1998)

**Violence in the Workplace**  
by Eric Roher  
Scarborough, Ontario: Carswell  
(HF 5549.5 E43 R63 1999)

**Violence in the Workplace: Prevention Guide**  
Hamilton, Ontario: CCOHS  
(HF 5549.5 E43 V56 1999)

### Calendar



#### Construction Safety Officer Professional Development Conference

sponsored by the Alberta Construction Safety Association (ACSA)

**March 2, 2001**

Calgary, Alberta

**Topic:** Environmental Awareness Training Program  
The program is comprised of two four-hour training seminars required for environmental train-the-trainer certification.

For more information, contact the ACSA in:  
Edmonton

☎ (780) 453-3311

☎ (800) 661-2272

✉ [acsa@compusmart.ab.ca](mailto:acsa@compusmart.ab.ca)

Calgary

☎ (403) 291-3710

☎ (800) 661-6090

✉ [acsa@telusplanet.net](mailto:acsa@telusplanet.net)

#### Petroleum Industry Annual Safety Seminar: Celebrating Our Success

**May 1-4, 2001**

Banff, Alberta

The Petroleum Industry Annual Safety Seminar celebrates its 50th anniversary at this internationally recognized forum for petroleum industry safety technology. Through this seminar, companies contribute to and obtain information pertinent to the safety and health of their employees, contractors and the public.

For more information:

☎ (403) 264-4311

[www.piass.org](http://www.piass.org)

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Links to the new Alberta working alone regulation, guidelines for employers, and questions and answers on the regulation.

[www.nielh.nth.gov/odhsb/manual/mxn31.htm](http://www.nielh.nth.gov/odhsb/manual/mxn31.htm)  
The NIOSH version of working alone policies.

#### ON THE ALBERTA HUMAN RESOURCES AND EMPLOYMENT LIBRARY

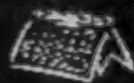
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# When it's time to Audit

by Bill Corbett

**N**o law compels Alberta companies to undergo health and safety audits. But such audits are becoming an increasingly important part of doing business, and for reasons that extend beyond the primary goal of worker health and safety.

There are also significant economic benefits to audits, as more and more companies are demanding a health and safety Certificate of Recognition (COR) before they will do business with contractors. As well, the Alberta Workers' Compensation Board is now offering an automatic premium rebate of five per cent to companies with CORs, an amount that can increase to up to 20 per cent with an accompanying excellent safety record.

"Safety is a big thing and it's becoming bigger all the time," says Joanne Cronin, regional quality assurance and safety manager with Initial Security, a major supplier of security officers to Alberta industrial sites. "The requirement that companies have certified safety programs is starting to become a standard part of the bid process, especially on bigger contracts." Indeed, the number of CORs issued by Alberta Human Resources and Employment (AHRE) has jumped from 2,000 to around 3,000 over the past year alone.

So what is a health and safety audit, and what's involved in undertaking one? Perhaps more importantly, how do you choose a qualified auditor, who can assess your health and safety programs and give you the passing grade needed to earn a COR?

"A health and safety audit is like a medical checkup. It's also a good

## Preparing for an Audit

Once you've selected an external auditor, ask how long the audit will take and what you should provide. For starters, the auditor will want your organizational chart, an idea of your company's experience rating and a private place to review documents and interview a representative sample of staff.

At a pre-audit meeting, the auditor should gather with key company staff to explain such things as the Partnerships program, the audit pass mark, the interview selection process, the audit turnaround time and date of the close-out meeting, the confidentiality of the audit process and when the auditor might intervene in "imminent danger situations."

To expedite the audit, your safety personnel should accompany the auditor throughout the process, coordinate interviews and make readily available documents such as the company's safety manual and safety files.

method of ensuring a company complies with a consistent standard within its industry group," says Barbara Semeniuk, president of Edmonton-based Purcell Enterprises Ltd., which audits safety programs in some nine Alberta industries. "An audit involves looking at all of a company's health and safety documentation — such as safety manuals, training records, accident investigation reports and safety committee meeting records — touring the workplace and interviewing a representative sample of employees."

To begin the process at your company, find out if your industry has an association that offers a safety audit and certification program. The Alberta Construction Safety Association and the Petroleum Industry Training Service are prominent examples of the 17 industry associations that are part of an audit program overseen by Workplace Health and Safety, called

Partnerships. Smaller industries not covered by the program come under the certifying umbrella of the Alberta Safety Council.

**A health and safety audit is like a medical checkup.**

These associations are responsible for setting health and safety auditing guidelines for their industry and for offering training courses that allow companies to establish and maintain proper health and safety programs. They can also guide companies through the audit process, providing both the documents needed for internal audits and a list of certified auditors that companies can choose from for their external audits.

"One of the most important things is to check with your industry association or with government to make sure you get the audit that





Besides checking prospective auditors for their qualifications, companies should also ask for references and price quotes.

pertains to your industry," says Semeniuk. "I've seen situations where a company has wasted a lot of time preparing for the wrong audit."

Once you have the right documents, do an internal audit to ensure your safety program meets your industry's standards. "You're usually harder on yourself in an internal audit, and it helps you make sure you're ready to pass the external audit," says Semeniuk.

The next step is to undertake an external audit. This can often be done either by another company in your industry or by a professional auditor. Alberta's construction and manufacturing industries tend to do more peer reviews, while the oilfield, trucking, forest products and food processing industries lean towards professional reviews. While a peer review is free and conducted by someone who knows your industry thoroughly, it can help to hire an outside professional, who might spot things overlooked by insiders. "In either case, you want an objective pair of eyes to identify your strengths and weaknesses," says Semeniuk.

"When you're choosing an external auditor, check with the certifying partner association first to see if they have a list of auditors," says Robert Feagan, manager of Partnerships. "The odd time, companies hire an auditor that is not recognized or whose certification has lapsed. In such cases, the whole audit is a waste because the auditor is not recognized. While some professional auditors specialize in one industry, most of the more successful auditors have taken the time and effort to become certified in four or five industries."

Besides checking prospective auditors for their qualifications, companies should also ask for references and price quotes, although the lowest price is no guarantee of the best job. "The auditor is someone you should feel comfortable with because they will know a great deal about your company's operations," says Semeniuk. "Their first obligation is to be objective, ethical and honest. One important ethical issue is that if a professional helps create your safety program, they shouldn't audit their own work."

A completed external audit is sent to the partner association to ensure it meets that industry's standard. If the audit meets the requirements, the partner requests AHRE to issue the company a certificate of recognition. Before issuing the certificate, AHRE will often undertake a few checks to make sure both the company and the association are living up to those standards.

While a certificate of recognition is good for three years, companies are obliged to do internal audits in the intervening years to ensure they are properly maintaining their safety programs.

Bill Corbett is a Calgary writer.

#### Resources

##### Web Links

[www.rutgers.edu/Accounting/raw/beac/standards.pdf](http://www.rutgers.edu/Accounting/raw/beac/standards.pdf)

Standards for environmental, health and safety auditing.

[hazard.com/library/consultants.html](http://hazard.com/library/consultants.html)

Selecting and using a consultant.

# CRITICAL SUPPORT FOR

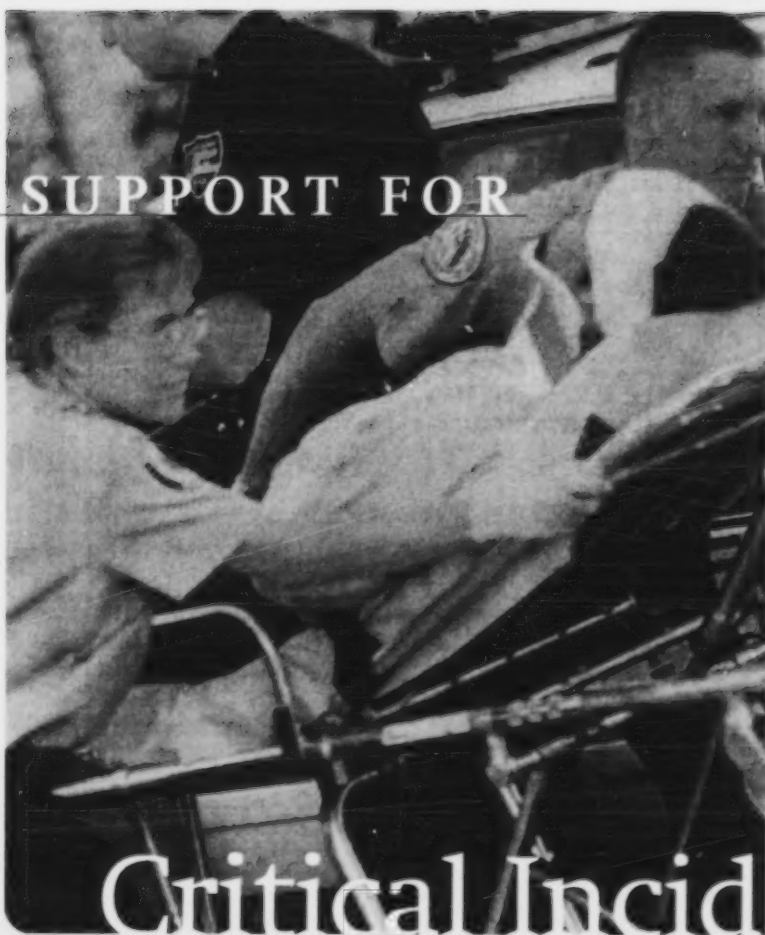
by Debbie Culbertson

**I**t was late in the afternoon, and all of the workers at the isolated BP Canada Energy gas well had left for the day — except for two contractors. One was driving a bulldozer in an effort to remove a vehicle that had become stuck in the muddy soil. Then, tragically, what had been a routine task became a terrible accident: the person driving the bulldozer ran over the other contractor. The distraught driver called for emergency assistance. Workers returned to the site to assist in any way they could but discovered that nothing could be done to bring the victim back to life. Paramedics also arrived, but soon realized that the victim was beyond help.

A sense of shock and futility settled on everyone, from the driver of the bulldozer to the people who had witnessed the incident's horrible aftermath. It would be four or five hours before the trauma team employed by the company could reach the isolated site and provide emotional support to the distressed workers.

Although this incident occurred several years ago, John Lea remembers it as if it were yesterday. Lea was in the company's Grande Prairie office when the call came in from workers at the site. "Many of them had interacted with the individual who died," says Lea. Even though they were not in the area when the incident happened, many were plagued with thoughts that they could have done something — anything — to change the outcome.

Lea, who is the operating centre



## Critical Incident

superintendent for the company's Grande Prairie operation, says this incident made company managers realize that additional worker-support measures were needed. "Previously, when there was a critical incident, we'd ask Janus Associates (a Calgary-based employee assistance provider) to go to the site and provide emotional support to workers affected by it," he explains. "But they usually couldn't get to the location until hours after it had happened. By then, employees could be in shock or traumatized. The impact could last several months."

The Canadian Mental Health Association defines a "critical incident" as any event that overwhelms a person's capacity to psychologically cope with the incident. In a critical incident, workers may experience vague to strong emotional reactions, including depression and suicidal thoughts.

These reactions can affect their ability to function, either at the scene or days or months later.

In response to the incident at the oil site, BP Canada Energy (then Amoco) added another layer to its emergency response procedures. The company put in place a critical incident stress management (CISM) program. "We hired Janus Associates to train people in all our field operations to react in an appropriate manner immediately after a critical incident," Lea says. "Foremen, senior workers and others who had a high level of trust with other staff were taught to act as 'people assistance leaders,' or PALS."

Within the Alberta government, Workplace Health and Safety has responded to the needs of its front-line staff and implemented a CISM program for its employees. Bruce Logan, the branch's provincial CISM coordinator,



ents

says that on any given day a WHS officer in any part of the province may be called upon to visit a site where a worker has been badly injured or killed.

"In the past," Logan says, "after someone witnessed a critical incident, we'd sit down over coffee and talk about it together." But three years ago the organization developed a more formal response. It established CISM teams throughout the province. These teams are made up of WHS officers who have been through a special training program with crisis intervention professionals.

Within 24 hours of a critical incident, a WHS critical incident

team member approaches each staff person who has witnessed it. Team members identify traumatic situations and administer mental "first aid."

"If a person is really traumatized and needs additional help, we provide them with phone numbers for referrals," says Logan. Complete confidentiality is assured, and workers are not penalized for sharing their experience with members of the CISM team.

Lea likens the PALS at BP Canada to "paramedics for the mind." Their work is not to provide long-term treatment for emotional wounds, but to help the person survive the first overwhelming waves of distress. This can be as simple as giving traumatized workers something to eat or drink, or blankets to keep them warm. The PAL reassures workers that counselling can be made available to them if needed. The PAL

compiles a list of those involved in the incident, so that counsellors can check on them later.

Today, approximately 60 workers at BP Canada are trained as PALS and are ready to assist any of the company's over 400 workers and contractors. Joanie Corbett, a chartered psychologist and partner with Janus Associates, says that the work done by the PALS is invaluable. "People can go into shock in these situations," she says. "The sooner their emotional needs are taken care of, the more likely it is that long-term negative impacts will be prevented." These impacts can include nightmares, fearfulness, increased stress and even an inability to do one's job.

While some workers at BP Canada or WHS decline the offer to "defuse and debrief" their experience, others unload a flood of painful feelings. Venting these stressful thoughts often helps people understand that they are having a normal reaction to an abnormal situation. If painful feelings are repressed, depression may result. If they are shared in non-judgmental settings, however, they decrease over time and become less painful.

BP Canada has had few critical incidents since the one that spurred the company to establish its CISM program. Nonetheless, the training has come in handy in more minor incidents. In one case, a company truck was destroyed. The worker who was driving the truck escaped without injury, but he was distraught over the loss of the vehicle. PALS at the job site quickly calmed him down and helped him get a more balanced perspective on what had happened.

Lea says the CISM program is appreciated even when it does not have to be implemented. "Employees know that the company cares about their psychological well-being," he says. It's all part of being a PAL.

*Debbie Culbertson is a writer and editor living in Devon, Alberta.*

## Critical Reactions

After a worker has witnessed a critical incident, he or she may experience:

- anxiety
- fatigue
- frustration
- anger
- irritability
- hopelessness
- moments of melancholy

Psychological reactions to trauma may include:

- frequent intrusive thoughts
- prolonged sleep disturbances
- emotional numbness
- depression
- withdrawal
- avoidance or denial
- constant memories of the situation

(Source: Alberta Connects, [www.albertaconnects.gov.ab.ca/health/crisis5.cfm](http://www.albertaconnects.gov.ab.ca/health/crisis5.cfm))

### Resources

Crisis Management Help Line:  
(800) 779-5057

24-Hour Crisis and Suicide Line:  
(800) 266-1605

(Source: Alberta Connects)

### Web Links

<http://www.icisf.org/>  
International Critical Incident Stress Foundation.

<http://www.icisf.org/links.htm>  
A page of links to CISM sites.

<http://www.workplacetraumacenter.com/Recovery.htm>  
Guidelines for CISM from the Workplace Trauma Center, Maryland, USA.

### IN THE ALBERTA HUMAN RESOURCES AND EMPLOYMENT LIBRARY

Video  
Critical Incident Stress  
(FVC 186)

This video demonstrates the value of a critical incident stress debriefing session for emergency responders conducted by qualified professionals.

# Wrist Splints and MSIs

by Ray Cislo

**W**alk into almost any grocery or retail store and you're likely to see them being used. Or roll up shirt-sleeves at the assembly line and you'll probably find them there too: splints, braces or bandage wraps — all of them attempts to provide relief for painful wrists, forearms and elbows.

Splints and supports are frequently used by workers suffering from a musculoskeletal injury (MSI), often caused by overuse of the wrist. Many splints are advertised as being useful for preventing injury or as an on-the-job treatment of an existing injury. In general, splints and supports are overused and are often of questionable value. If used, they need to be chosen carefully and worn properly.

## What are MSIs?

MSIs are referred to by a variety of names including repetitive strain injuries (RSI) and cumulative trauma disorders (CTD). In each case, the name describes injuries of the bones, joints, ligaments, tendons, muscles and other soft tissues. Some MSIs have names that indicate the type of work performed — carpet layer's knee, letter carrier's shoulder or pizza cutter's wrist. MSIs also have medical names such as carpal tunnel syndrome (an injury to one of the nerves passing through the wrist) and tendonitis (inflammation of a tendon). MSIs are of two general types.

Overexertion injuries occur when tissues are subjected to a single traumatic event that exceeds their strength or range of motion. The result is a sprain, strain or tear injury. Lifting, pushing or pulling injuries are often of this type.

Overuse injuries occur when tissues

are used too much and the body is unable to repair the damage. Repeated small injuries add up over time, taking hours, days, months or years to appear. In the case of wrist injuries, excessive bending and twisting of the joint, coupled with repeated gripping with the hand, can lead to injury.

## Purpose of splints

Splints or supports are intended to reduce the risk of using a joint or limb in a way that might aggravate the injury. Splints can help to rest a muscle, position or protect a joint, or prevent tissues such as nerves from being compressed. Splints should keep joints such as the wrist in a neutral position, the position the wrist naturally assumes at rest. A neutral wrist position minimizes stress and pressure on the joint and the tissues passing through it.

Wrist splints should be used during sleep, when most people place their wrist in a flexed or bent position. Unless advised by a doctor or other medical professional, wrist splints should not be worn during activities that involve the affected joint. This applies to activities both at work and at home.

## Problems with splints

Wrist splints should be prescribed by doctors, physiotherapists, occupational therapists or other health professionals. When used properly following an assessment, they can be helpful



However, the use of splints by workers who are not injured, and by injured workers while working, creates the following risks.

### • Muscle weakness

If a joint is immobilized through splinting, muscles controlling the joint are not used and weaken. To compensate, other muscles are put into action and try to make the arm function normally. Reliant on the splint for support and on other muscles to perform their work, the weakened muscles are more prone to injury when the splint is removed.

### • Joint immobility

Splinting a joint for long periods of time (four weeks or more) can reduce the joint's range of movement and therefore its ability to function normally. This again leaves the joint more prone to injury once the splint is removed.

### • Increased stress on joints and other muscles

If the arm is used while the wrist is splinted, the elbow, shoulder and muscles of the arm are at risk for injury. In compensating for the reduced mobility of the wrist due to the splint, physical stresses of the worker's job or activities may be transferred to joints and muscles

elsewhere in the arm. These joints and muscles might also become injured. The splint itself may interfere with a worker's ability to handle or grip objects during work.

- Worsening of wrist problems  
There is evidence that workers with carpal tunnel syndrome can actually aggravate their injury by wearing a wrist splint while working. Work and other activities can place unwanted forces on the wrist splint, placing potentially damaging pressure on nerves passing through the wrist.

#### Recommendations

- Use a wrist splint only on the advice of a medical professional and use it only as instructed, particularly if the splint will be worn while performing activities involving the wrist and arm.
- Unless advised by a medical professional, wrist splints are best used during sleep. Doing so protects the joint from excessive motion or awkward positions, while at the same time permitting injured tissues to rest and recover.
- Prevent injuries by recognizing, evaluating, and controlling workplace factors that might contribute to them. Modify workstations, work processes, equipment and tools to prevent MSIs.
- Educate workers and supervisors to recognize early signs and symptoms of MSIs. The chances of complete recovery are good only if the injury is caught early.

Roy Cislo, P. Eng., B.Sc. (H.K.), is a safety engineering specialist at Workplace Health and Safety.

#### RESOURCES

##### WEB LINKS

[www.tlfaq.org](http://www.tlfaq.org)

The Typing Injury FAQ (frequently asked questions) is an educational site, provided by the CTD Resource Network, Inc.

[www.worksafebc.com/pubs/brochures/ec/ergo.htm#asp](http://www.worksafebc.com/pubs/brochures/ec/ergo.htm#asp)

Information for wrist support use:

[www.ergoweb.com](http://www.ergoweb.com)

This is a commercial organization that serves as a clearinghouse of useful ergonomics information.

## Real World Solutions

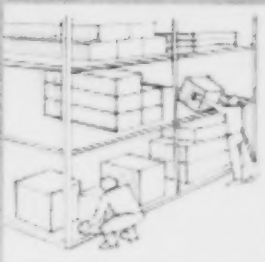


In the real world, identifying and resolving ergonomic issues requires awareness, knowledge and a willingness to try new things. Real World Solutions is a regular column that suggests simple, inexpensive ways to improve employee health through adjustments to the workplace.

If you've found a solution that you would like to share with our readers, please send it to [ray.cislo@gov.ab.ca](mailto:ray.cislo@gov.ab.ca). We will publish those that apply to a broad range of situations.

## Proper Storage Heights

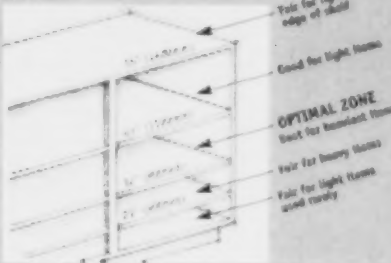
### BEFORE



### The Problem

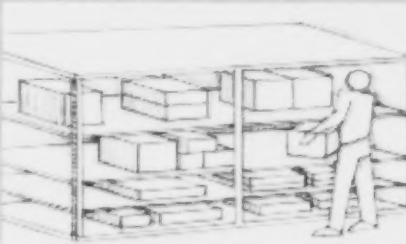
Workers have to lift heavy materials off the floor and lower moderate-weight materials stored above their shoulders.

### AFTER



### The Solution

Reposition shelves to optimal lifting and lowering heights. Selectively arrange stored materials to take advantage of these heights.



### Benefits

- Makes it easier for workers to move materials and avoids unnecessary bending and stooping.
- Reduces potential for back injuries due to excessive lifting, and shoulder and neck injuries due to repeated overhead lifts.
- May improve productivity and make better use of existing storage areas.

elsewhere in the arm. These joints and muscles might also become injured. The splint itself may interfere with a worker's ability to handle or grip objects during work.

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Ray Cuslo, P. Eng., B.Sc. (H.K.), is a safety engineering specialist at Workplace Health and Safety.

[www.tfaq.org](http://www.tfaq.org)

The "Lifting Injury FAQ" (frequently asked questions) is an educational site provided by the CIO Resource Network, Inc.

[www.worksafebc.com/pubs/brochures/ec/ergo/mm2.asp](http://www.worksafebc.com/pubs/brochures/ec/ergo/mm2.asp)

(Information for wrist support use)

[www.ergoweb.com](http://www.ergoweb.com)

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# Clerks **FEEL** the

## Sales, shipping and receiving clerks on the front line for MSIs

by Anne Georg

**R**etail and wholesale is Alberta's largest economic sector in terms of the number of person hours worked. It made up 21 per cent of the total provincial person years worked in 1999. This sector also has the lowest lost-time claim rate of any sector in the province.

Still, all is not well in the retail and wholesale sector: injury rates among sales clerks and shipping and receiving clerks are especially high. In 1999, sales clerks had the fourth highest provincial injury rates, and shipping and receiving clerks had the seventh highest. Statistics show that the bulk of the lost-time claims by these workers are for MSIs (musculoskeletal injuries) caused by overexertion and repetitive strain. Consequently, government and employers are looking for ways to correct the problems that produce MSIs.

### At the check-out counter

As in the manufacturing sector, much of the incidence of MSIs among cashiers can be traced to poorly designed workstations. "They just don't fit the worker," comments Ray Ciso, safety engineering specialist at Workplace Health and Safety. This may partially explain why women in the retail and wholesale sector have a higher injury incidence rate than the overall provincial rate. (See "Women and Strain Injuries," *Occupational Health & Safety Magazine*, January 2000)



Other aggravating factors are the highly repetitive nature of the work and the odd hand and arm positions required when scanning product packages of various sizes and shapes, says Ciso. Because of the demands of customer service, cashiers — unlike workers in the manufacturing sector — cannot always pace themselves and take evenly spaced rest periods. A cashier's work is dictated by the size of the lineups at the check-out counter.

Overwaitea Food Group, which has 14,000 employees in Alberta and British Columbia, has found that two-thirds of the grocery store chain's Workers' Compensation Board (WCB) claims are due to MSIs resulting from lifting bags and cases. Despite the chain's growth in the past seven years, Overwaitea has been able to reduce the number of claims. From 1992 to 1998, the grocery store chain experienced a 14-per cent decrease in claims and a 20-per cent decrease in the number of days lost.

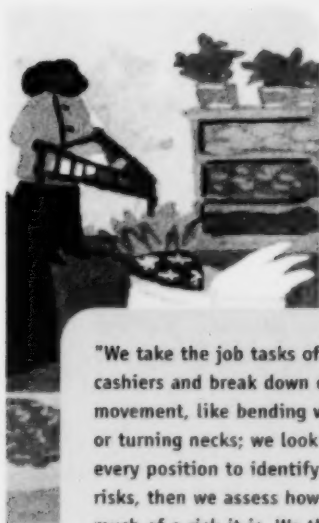
"Since 1992 we've introduced better

training and better workplace design, and we have improved our staff's overall awareness of workplace health and safety issues," comments Mike Stortz, human resources generalist for the company. Overwaitea categorizes its health and safety guidelines into engineering design controls, procedural controls and people controls.

The company responded to cashier injuries by re-engineering its check-out stands. Today's stand is hydraulically adjustable to accommodate cashiers' different heights. The design minimizes the required reach when cashiers are scanning groceries, and the height of the bag rack is adjustable so cashiers can take bags off the racks at waist level. The position of the screens allows cashiers to look directly at them, rather than having to twist their necks to see them, and their keypads are positioned at an ergonomically safe angle.

"We take the job tasks of cashiers

# PAIN



"We take the job tasks of cashiers and break down every movement, like bending wrists or turning necks; we look at every position to identify the risks, then we assess how much of a risk it is. We then take the injury-prone task and correct it."

Mike Stortz, Overwaitea Food Group

and break down every movement, like bending wrists or turning necks; we look at every position to identify the risks, then we assess how much of a risk it is. We then take the injury-prone task and correct it," says Stortz.

Overwaitea's procedures ensure that all employees receive training, beginning with their first day on the job and continuing with updates. Special training is also provided when an employee takes on a new task. Employees are trained to properly perform tasks such as lifting, handling and scanning packages, pulling and pushing groceries to reduce twisting, and lifting bags off the rack.

"We try to look at the whole job. For example, we recognize that cashiers can't take frequent scheduled breaks, so wherever possible we try to

encourage micro pauses. We suggest that whenever cashiers wait for a transaction, they put their foot up on a shelf, do pelvic tilts or do other back stretches. We think micro pauses are important to relieving back strain," Stortz says.

As well, trained health and safety committees hold monthly meetings at each location to identify specific health risks and ergonomic concerns. Employees are encouraged to give the committees their suggestions for improvements.

Cashiers at IKEA Canada are also benefiting from improved check-out stands. The company introduced anti-fatigue mats in response to concerns about pressure on heels and backs while standing for long hours. "It's been a great success," says James Paul, risk manager for IKEA Canada.

Cash desk designs were improved to make it easier for customers as well as cashiers. Now, heavier items remain in the carts, and cashiers move to the items to scan them, while smaller items are put on the conveyor belt. This makes packages easier to handle, and cashiers are able to move around instead of continually standing in one spot. The furniture store also introduced scan guns that reduce the amount of repetitive keyboarding cashiers must perform.

Like Overwaitea, IKEA has safety committees at each store. These committees ask for worker input on health and safety concerns. "That way, employees feel responsible for their jobs and comfortable performing the tasks involved in them," Paul says.

## In the warehouse

A large component of IKEA's business is its warehouse, the workplace of receiver-shippers and stockers. MSIs due to overexertion in IKEA's warehouses accounted for six of 10 incidents in 1999. Monthly warehouse inspections help to ensure that each aisle in the store is safe, and safety training for everyone in the warehouse ensures that workers know about good body mechanics for lifting.

IKEA has a self-serve warehouse component, so the company must also be aware of customers' safety. Workers

help to get all heavier items for customers, and signs in each aisle inform customers that they should ask for assistance in lifting heavier items.

IKEA's warehouse workers place items on shelves in a way that promotes safety. Lighter items are placed on shelving between hip and shoulder height. The heaviest items are placed just above floor level, where they can easily be pulled onto a cart that is designed especially for that height.

This procedure eliminates lifting, which Cislo says is a significant risk factor for MSIs. "In warehousing, just storing the products off the floor can help reduce a tremendous number of overexertion injuries caused by lifting and lowering," he says.

MSIs continue to be a major challenge in Alberta's retail and wholesale sector. But employers are constantly striving to redesign workstations and refine work techniques with a view to reducing the incidence rate for this type of injury.

Anne Georg is a writer and communications consultant who works from her home base in Calgary.

## RESOURCES

### WEB LINKS

[www.cdc.gov/niosh/ergopage.html](http://www.cdc.gov/niosh/ergopage.html)

NIOSH selected topics on ergonomics and musculoskeletal disorders.

[www.ctdrrn.org/](http://www.ctdrrn.org/)

Contains a wide variety of information about repetitive strain injuries (RSIs), resources for dealing with these ailments, and a broad description of assistive products to reduce injury risk and symptoms.

[www.plgrm.com/health/musculoskeletal.html](http://www.plgrm.com/health/musculoskeletal.html)

Links to resources for various types of musculoskeletal injuries.

### IN THE ALBERTA HUMAN RESOURCES AND EMPLOYMENT LIBRARY

**Musculoskeletal Disorders in Supermarket Cashiers**

by Colin Mackay  
Sudbury, Suffolk UK: HSE Books  
(RC 925.5 M32 1998)

**Warehouse Workers Safety Guide**

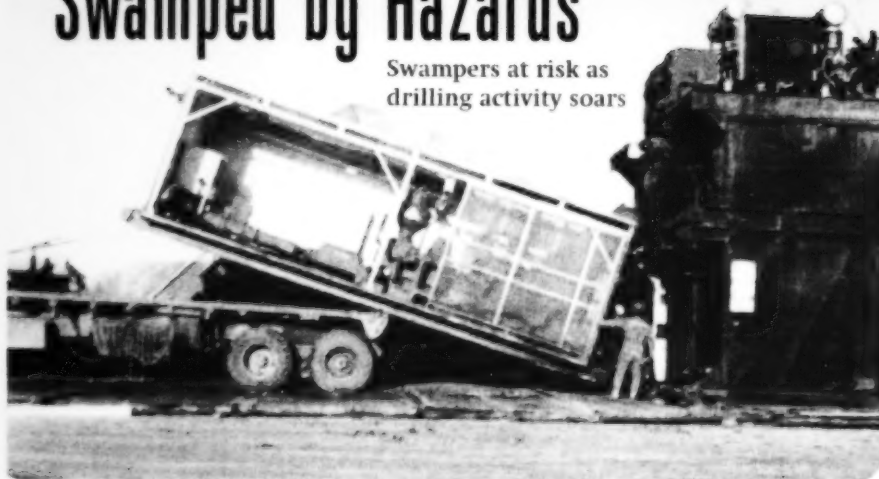
Hamilton, Ontario: CCOHS  
(HD 7261 W37 1998)

**Ergonomics of the Supermarket Cashiers' Environment**

by Richard Wallis  
Department of Kinesiology and Centre for Applied Health Research, University of Waterloo  
(RC 925.3 E73 1990)

# Swamped by Hazards

Swampers at risk as drilling activity soars



A swamper spots a pump skid as it's manoeuvred into position. To be safe, he should move further back from the skid.

**B**y some, it's considered the toughest, dirtiest and most dangerous work in the oil, gas, forestry and mining industries. On sites where everyone is pushing the clock, where mammoth-sized vehicles and other pieces of equipment are constantly manoeuvring, swampers are in the thick of the action. They are directing traffic, helping truck or equipment operators, or clambering up and down equipment. Swampers work with everything from cranes to truck tires: they hitch and winch, load and unload, and prepare equipment for road travel.

Three swampers died last year on work sites. In times of high industry activity, this is a particularly high-risk group say government, industry and labour representatives.

The present drilling season is a particularly hectic one, and employers are urged to take the necessary steps to safeguard swampers, while swampers themselves are encouraged to get the training they need.

If you're a swamper, how do you protect yourself? It's simple, says Verleen Barry, occupational health and safety officer at Workplace Health and Safety: "Get training and always, always follow procedures." In the rush to get more done in less time, it's easy to shortcut the right way to do things, but

if you don't want to shortcut your life, you have to pay attention. Barry emphasizes, "For example, just using hand signals correctly can make a big difference," she notes.

## Workers

It's not enough to be strong and quick to be a swamper. On site, you need to know what's going on, who does what, what equipment is used, how to use hand signals, and above all, what hazards you'll encounter. Staying safe means staying focused. Always be aware of your body in relation to your surroundings. Look up, down and to both sides to make sure you are not in the line of any object that could strike and injure you.

**BEST ADVICE:** Get training to avoid injury or worse! But also:

- Know how to identify hazards
- Remind your fellow workers to refuse unsafe work
- Follow your own advice

**Where are you putting your fingers, hands or feet?** They can easily be caught between moving parts and crushed.

**Where are you in relation to the trucks?** Your soft tissue is no match for their armour. Don't ever put yourself in a position where you could be pinned

by a truck or other moving equipment.

**Where are you in relation to the trucks' tires?** Are there rocks on the ground that the tires could spin off in your direction? These can maim.

## Lease operators

- Post signs on lease sites warning of overhead power lines
- Remind consultants of their responsibilities under the *General Safety Regulation*

## Supervisors

- Always hold pre-job safety meetings
  - Identify and control all hazards
  - Convey hazard information to your workers
  - Make sure workers always follow procedures to control hazards
  - Verify worker qualifications and reinforce training at the work site
- ## Transportation companies
- Enrol swampers in the Petroleum Industry Training Service (PITS) Oilfield Swampers Training Course

## RESOURCES

### Oilfield Swampers Training Course

This one-day program is intended for swampers who assist the equipment operator in the safe loading, transportation, off-loading and erection of oilfield equipment and materials. Topics covered include legislation, pre-job preparation, field equipment preparation, lease activities, travel and post job duties. Upon successful completion of the written examination, the student is issued an industry standard certificate of completion.

April 3, 2001  
October 1, 2001

or on demand when sufficient interest is shown.

For more information, please contact the Petroleum Industry Training Service:

☎ (800) 567-5557

or Jim Shaffer:

☎ (780) 955-6005

✉ jshaffer@pits.ca

## Publications List

Workplace Health and Safety, Alberta Human Resources and Employment

Workplace Health and Safety produces publications on a variety of occupational health and safety subjects. Publications come as manuals, brochures, booklets, bulletins, posters and stickers, and are regularly reviewed and updated.

### New Publications

An Explanation of the *General Safety Amendment Regulation — Working Alone* (WA002)

- A plain language explanation of the requirements of the working alone regulation — an amendment to the *Occupational Health and Safety Act*. Accompanied by the complete text of the regulation.

New Working Alone Regulation — Questions and Answers (WA001)

Use of Flammable Hydrocarbon Mixtures as Freon Substitutes in Vehicle Air-Conditioning Systems (CH058)

- A summary of safety concerns involving freon-gas substitutes.

Lifting and Handling Loads, Parts 1 - 3

- Reviewing the Issues (BCL001)
- Assessing Ergonomic Hazards (BCL002)
- Reducing Ergonomic Hazards (BCL003)
- How to recognize, assess and reduce manual lifting and handling hazards.

Musculoskeletal Injuries, Parts 1 - 6

- Alberta Injury Statistics and Costs (ERG017)
- Symptoms and Types of Injuries (ERG018)
- Biomechanical Risk Factors (ERG019)
- Workplace Risk Factors (ERG020)
- Assessing Ergonomic Hazards (ERG021)
- Reducing Ergonomic Hazards (ERG022)
- Practical advice on recognizing, understanding, assessing and reducing hazards that can cause musculoskeletal injuries (MSIs).

First Aid Records (FA009)

- Minimum record-keeping requirements of the new *First Aid Regulation*.

Unintentional Energizing of an Electrical Trailing Cable (MN001)

- Approaches to preventing similar mining incidents.

### Incident descriptions

Worker Injured When Lifting Clamp Fails (AL020)

Welding Gas Explosion on Service Truck (AL025)

Cut-Off Wheel Fractures During Use: Worker Killed (AL024)

Worker Seriously Injured While Using Cathod (AL023)

Chemical Cutting Tool Discharges at Surface (AL022)

### Revised Publications

The Effects of Unusual Work Schedules and Concurrent Exposures on Occupational Exposure Limits (OELs) (CH055)

- How to adjust OELs for those working extended hours.

Health Effects of Active and Passive Smoking (GH001)

- A brief summary of current research that includes advice to employers and workers on developing company policies related to smoking.

Health and Safety Issues Associated with the Ozone-Friendly Refrigerant Substitute HCFC-123 (CH043)

- Safety issues related to HCFC-123, and ways to control exposure.

Medical Monitoring of Workers Exposed to Sewage (MG012)

- Advice to nurses and physicians who assess and counsel workers exposed to sewage. Includes immunization recommendations.

### New Posters

Most Things Are Better Seen With Two Eyes (PH008)

An Essential Part of a Safe Workplace (FA002)

Check the Signs (CH006)

Put Safety First (LI006)

- Posters focused on eye hazards, first-aid kits, WHMIS symbols, and work site health and safety committees.

Over 200 publications are available from Workplace Health and Safety (WHS). Find them on the WHS Web site, [www.whs.gov.ab.ca](http://www.whs.gov.ab.ca) or order them through the WHS call centre, 1-866-415-8690.

## The Last Resort



## reporting on recent convictions

under the *Occupational Health and Safety Act*

### Employer

Fiesta Party Rentals

### Incident

On July 9, 1999, two workers were erecting a large polyethylene dining tent at the rodeo grounds near Bragg Creek when the aluminum tent pole they were manoeuvring contacted a live overhead power line of 14,400 volts. One worker was electrocuted and another worker received electrical burns to his hands and feet.

### Violation

The company was found guilty of one count of failing to maintain proper distance from an overhead power line under section 26(1) (b) of the *General Safety Regulation*.

### Fine

\$100,000

Full fatality reports are available from the Alberta Human Resources and Employment Library, (780) 427-8533, or toll-free, 310-0000, or on the Workplace Health and Safety Web site, [www.whs.gov.ab.ca](http://www.whs.gov.ab.ca).



## Young workers from Alberta attend Ottawa health and safety conference

Across Canada, concern is growing over the number of young workers injured every year on the job. In 1999 youths aged 15 to 24 accounted for 43 per cent of the injuries in the workplace.

In Ottawa last October, a dialogue began that may help reverse this trend. At the Youth Health and Safety in the Workplace conference, government, labour, corporate and youth delegates met, shared information and experience, and settled down to the task of developing recommendations to help improve occupational health and safety for young workers.

At the request of Alberta Human Resources and Employment, the Partnerships team at Workplace Health and Safety assembled a delegation of ten young workers from Alberta. They represented the forestry, trucking and construction industries. Nicole Harvey, a Workplace Health and Safety employee who attended the conference as a youth delegate, represented government and coordinated the group.

What advice did the young delegates take home to fellow workers? "We want to let everyone know they do have rights," states Harvey emphatically. Harvey, just 24, recognizes that it's difficult for young workers to feel confident enough to insist on their rights, but she says they can and should "check policies and safe work practices" where they work. "And it's my opinion they shouldn't work where they don't have policies," she says.

Harvey was impressed by keynote speaker Mel Camilli from the Workers' Compensation Board in British Columbia, who at 21 was severely injured in a logging incident shortly



Some Alberta delegates at the youth working in Ottawa conference. From left to right: Nicole Harvey, Jeff Balfour, Michelle Williams, Ryan Knight, Nicole Harvey, Jennifer Proulx, and a group of young workers. Photo by: [illegible]

after he started his job. As a result of the incident, he lost both legs. "He was new to the job and didn't want to admit he didn't know what to do, he didn't even know what to ask. He admitted he was too proud to ask, and thought he could figure things out for himself," says Harvey, who believes this is a common experience for new young workers.

The youth delegates organized breakout sessions to discuss the problems they saw confronting young workers. For example, when they start new jobs, Harvey points out, "young workers also need to know the training and courses available to them."

Federal government representatives offered to take the recommendations to Cabinet and to consider making the conference an annual event.

The conference was hosted by the federal government and co-sponsored by the Communications, Energy and Paper Workers Union of Canada and the Canadian Chemical Producers Association of Canada.

For more information about Partnerships, call the Partnerships Hotline: (780) 427-8842 or toll-free, 310-0000.

The delegates made three recommendations designed to help young people improve their understanding of health and safety issues and stay safe on the job.

- Incorporate health and safety programs into schools, from kindergarten through grade 12.
- Introduce industry-specific health and safety courses in colleges.
- Emphasize to employers that they must implement and maintain policies and procedures, and respect laws related to workplace health and safety.

## Web Watcher



by Bob Christie

### In the spirit of Internet cooperation

One of the really neat things that used to be a hallmark of the Internet, and to a great extent, still is, is the spirit of cooperation. Go to a listserv and ask a question that's plaguing you ... and presto, you will get answers. Some of them may be no more than opinions, but there will be some good, well-thought-out, experience or research-based submissions that can really get you out of a jam. Imagine being able to phone 10,000 or more safety folks, from all over the world, all at the same time.

Another aspect of this cooperative phenomenon is the amount of work that some people will do to be of assistance to others without payment or, much of the time, even credit. One of the Internet good guys on the Alberta health and safety scene is Alan Quilley, a CRSP who has, since 1998, been the regional director of Occupational Health, Safety, and Wellness for the Capital Health Authority. In his spare time, Alan has managed to put together a really nice list of Internet health and safety links.

Found at [plaza.powersurf.com/safetystuff](http://plaza.powersurf.com/safetystuff), this list of resources is notable for its focus on Alberta- and Canada-based sites with highly relevant information. If you're looking for the latest from an Alberta organization or government department ... look first at Alan Quilley's site. Want something from or about a Canadian organization ... do the same. Clearly this site is, like all list sites, incomplete, but this one is about as good as they come without being cluttered by the increasingly irrelevant.

Keep up the good work, Alan. If we work together in a spirit of cooperation, we all benefit. At the end of the day, that is probably the most important way the Internet can change the way all of us work.

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*The Alberta delegation of young workers in Ottawa. From left to right: Kerry Loader, Jeff Perrard, Michael Andrusiak, Ryan Wright, Nicole Harvey, Brandon Price, Charna VanEden, Lisa Plamondon. Absent: Nicholas Wegener, Patrick Charron*

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Alberta Human Resources & Employment Library

#### Recent Acquisitions

##### Safety and Health Management Planning

by James Kohn and Theodore Ferry  
Rockville, Maryland: Government Institutes  
(T 55 S22 1999)

- This book emphasizes the reduction of costs through cost-benefit analysis. It also covers new regulatory and technological developments that have occurred in the past six years. New and expanded topics include safety measurement and benchmarking, staffing and developing the safety function, budgeting, using audits and safety committees effectively, and personal protective equipment.

##### Guide to Accident Prevention 1999

Calgary, Alberta:  
ABKO Holdings (1977) Ltd.  
(T 55 N3 G84 1999)

- This booklet presents an overview of Newpark Canada Inc.'s total safety program and the responsibilities of all personnel.

To borrow materials, please contact your local library and make your requests through the inter-library loan process.

The library is linked electronically to 25 university, college, health and government libraries across Alberta. You can search the library catalogue over the Web through [gate.library.ualberta.ca](http://gate.library.ualberta.ca). The Alberta Human Resources and Employment Library location code is AB HR & Employment.

#### You can visit us in person at: Alberta Human Resources & Employment Library

3rd Floor, 10808 - 99 Avenue  
Edmonton, Alberta T5K 0G5  
(780) 427-8533  
toll-free connection 310-0000  
(780) 422-0084  
[www.whs.gov.ab.ca](http://www.whs.gov.ab.ca)

# You can train young workers to make good decisions

by Marilyn Buchanan

**I**f you are responsible for training workers under 24, keep in mind the traits (or peer group norms) that drive this group. Understanding their mindset will help you develop effective health and safety training, specific to their needs.

#### What drives young workers?

**autonomy** This age group is working hard to act independently. Their behaviour is therefore often seen as rebellious. It is a necessary behaviour, however, for them to develop decision-making capabilities. An appropriate learning/education/training environment allows individuals to take some level of control for their learning.

**peer influence** Also known as peer pressure. Can we turn this into a positive through positive modelling?

**risk taking** Taking risks is often considered the "heroic" thing to do — a demonstration of autonomy or independence. This is particularly true of males. To grow, individuals have to be able to analyze and determine things for themselves, including identifying and managing hazardous situations. Working with young people requires that we acknowledge this tendency towards risk taking and find ways to manage the desire to test the limits.

**high audio/visual sensation needs** The sensory/motor cortex and the vision and hearing centres are fairly well developed in this age group. But the connections between the emotions and thinking-brain areas aren't working as well. Emotions tend to rule, resulting in the gravitation towards high visual/audio sensations. Hormones in the pleasure centres drive the need for fast-moving and loud activities.

#### Take action!

The airline industry provides a good example of how to teach cognitive (thinking) skills. Student pilots take part in simulator exercises that allow them to experience possible piloting scenarios. Through this experience students learn to recognize inconsistencies, hazards, warning signs, etc., and how to manage these conditions. Training provided to young people needs to incorporate such learning opportunities.

# No Lost Time

by Anita Jenkins

## for Footner Forest Product's Mega Construction Project

Over the past summer and fall, Chris Miller regularly visited the construction site of the new Footner Forest Products panel board mill at High Level. Miller, an Alberta government occupational health and safety officer based in Peace River, describes it this way: "I threw my pass card in the vehicle, and in I went."

Chris says he enjoyed a very positive relationship with the management and workers at Footner. "I contacted the company early on," he says, "and they gave me carte blanche."

Involving Chris at the outset was just one of many steps that helped to promote safe work habits on this \$230 million project. And the overall focus on safety really paid off. Despite fast-tracking, with work going on 24 hours a day, seven days a week for 14 months, there were no lost-time incidents.

"This doesn't happen often enough," says Bob Callahan, a consultant with HSB Safety Management, whose role was to oversee the safety aspects of the project. Miller agrees. "Unfortunately, the occupational health and safety officer is often in a reactive role, being called in after an accident has already occurred."

The mill covers 17 acres of land — it's as long as three football fields. Its construction required a total of one million person hours. There were as many as 780 workers on the site at one time, and altogether between 1,500 and 1,800 different workers were involved. Workers from as far away as Newfoundland were hired, along with a lot of what Callahan calls "local talent." So how was such an outstanding safety record achieved on this enormous, complex and fast-moving project?

### Employees hired for safety attitude

"We looked for people with a good attitude and a good work ethic," says Callahan. To this end, workers and managers received training, both from

the health and safety professionals on the site and from Miller.

"I try to make sure that workers know their rights regarding safe working practices," Miller says. "If a supervisor says, 'Jump in that hole,' the worker has a right to refuse if he or she feels the situation is unsafe — or could be unsafe."

Every crew held daily tailgate meetings to review safe working practices with the supervisor and discuss and/or investigate any close calls that occurred during the previous day. "Every day was a learning experience," Callahan explains. For example, one worker fell from 50 feet above the floor, but he was wearing a harness. The worker reported that the only thing that was hurt was his ego.

The operation's zero-tolerance discipline policy helped too. If you failed to wear personal protective equipment, use the 100 per cent continuous tie-up fall protection system or follow the other safety procedures that were all explained thoroughly before anybody went on the site, you were out of a job.

In the latter stages of the project, prizes and awards became a major motivational tool. A draw for a red 2001 Ford XLT Supercab truck was held on October 20, 2000, the day the construction work was completed and the first board produced. The chances of winning were closely tied to the observation of safety rules. Workers who committed safety infractions had their names removed from the draw, and the whole deal would have been off if even one lost-time incident had occurred before start-up.

The competition for this coveted prize increased peer pressure to follow the safety rules. If people saw a co-worker who wasn't wearing protective eyewear, Callahan reports, they'd say, "Hey, you're ruining our chances of winning."

Every day was a learning experience

Merv Souther, the general foreman of Demac Management, was the lucky winner of the truck. Souther says that the safety people did a good job throughout the project, but that everybody made "a more concerted effort" after this major reward was announced. "I think it kicked it over," he comments.

Other safety-oriented draws held within various crews, and government-sponsored awards, also reinforced positive attitudes about safety.

### Coordination, communication and cooperation

More than 10 different contractors, representing a variety of construction-related trades and professions, were brought in for the project. A tremendous amount of coordination and communication was required to ensure that individual workers and crews were properly trained and constantly reminded to observe safety regulations and keep an eye out for hazardous situations.

To manage this challenging task, seven safety officers worked with the different contractors and two with Callahan. (Callahan also had two paramedics on his team.) All the contractors worked closely with each other on the safety front, Callahan says.

"We had an open door policy for Chris Miller," Callahan adds. The two men had worked together previously on another project and have a good working relationship.

Miller came to inspect the job site every third week to ensure that all safety practices were being followed, and he "educated and enforced," as he describes it. Cooperation with the government health and safety officer is just common sense according to Callahan. He notes, "We told Chris that we'd rather run towards him than try to hide our mistakes."

"Contractors, suppliers and government inspectors all have a responsibility," Miller comments. He notes that government health and safety officers know the legislation on minimum standards and that "they have a lot of authority." But, he says, the really successful officers avoid going on power trips. "You have to put yourself in the other person's shoes and see things from a practical point of view," he explains.

**Commitment from management**  
Peter Grant, Sr., one of the owners of Footner Forest Products, said at a planning meeting that he did not expect anybody to take risks in order to ensure the ambitious construction timelines were met. The company also made sure that health and safety professionals were on the site; they hired Bob Callahan right at the beginning.

Miller sums it up this way. "A good guy to work for is the one who wouldn't ask you to do anything he wouldn't do himself."

Now that the Footner Forest Products mill is up and running, Callahan has moved on to another project. Let's hope more employers can be inspired to team up with health and safety officers. This kind of partnership seems to work to everyone's benefit.

*Anita Jenkins is a freelance writer and editor who lives in Edmonton.*

## What's Happening at High Level?

**Project:** Panel board (OSB) mill, High Level

**Owner:** Footner Forest Products, a partnership of Ainsworth Lumber of Alberta and Grant Lumber of Ontario

**Production potential:** 900 million sq. ft. of 7/8" OSB annually

**Number of employees:** 129

**Size:** Covers 17 acres; largest OSB mill in Canada and third largest in North America

**Cost of construction:** \$230 million

**Construction timeline:** 14 months, with operations beginning on October 20, 2000



# See the Light

## And Shade Your Eyes

by Heather Marshall

**T**hey weren't kidding about the blinding sun. As you squint against the winter sun when you walk outside at this time of year, make sure you reach for your UV-protection-coated sunglasses. Without protection, exposure to ultra-violet (UV) rays contributes significantly to a variety of eye diseases that can cause permanent eye damage.

One frightening disease is often overlooked. It's called macular degeneration (MD) and affects 25 per cent of people over the age of 60, and 40 per cent over 75, claims Larry Gies, president of the Alberta Association of Optometrists. There is no cure for the disease.

Macular degeneration refers to the thinning out or degeneration of the "macula," a spot on the retina that provides us with central vision. As the tissue of the macula degenerates or thins out, central vision becomes impaired. There are two types of MD, explains optometrist, Laura Dwernichuk, "wet" and "dry." The dry form is the least severe, meaning that it usually does not lead to legal blindness. This accounts for about 90 per cent of cases. Wet MD can lead to complete blindness, and is so named because vessels leak blood and fluid into the macula. This damage can happen rapidly and lead to loss of central vision in a short time.

A slowly progressing disease, dry MD has no cure or treatment, nor is its cause completely understood. Wet MD can be treated with laser surgery if caught early enough.

Some factors contributing to MD are known, however. According to Dwernichuk, besides high blood pressure and smoking, exposure to UV rays increases the risk of MD. The disease occurs after long periods of exposure to UV. Therefore people working outdoors should be encouraged early on to wear sunglasses with 100 per cent UV protection, and a hat with a brim. It's not always necessary to wear sunglasses per se, as it's possible to get prescription glasses with a UV coating that provides protection.

Experts say that the risk of MD can be reduced with preventive actions such as a healthy lifestyle and wearing UV eye protection. It's up to you. Just like applying sunscreen to prevent skin cancer, it's far better to start sooner than later.

*Heather Marshall is an Alberta writer and editor.*

## Employers, protect your workers' sight!

- encourage workers to protect their eyes from UV rays
- encourage workers to have regular eye exams for early detection of MD
- encourage employees to manage stress appropriately, exercise and eat well
- implement non-smoking policies

Contractors, suppliers and government inspectors all have a responsibility," Miller comments. He notes that government health and safety officers know the legislation on minimum standards and that "they have a lot of authority." But, he says, the really successful officers avoid going on power trips. "You have to put yourself in the other person's shoes and see things from a practical point of view," he explains.

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# OHS Regulatory Review Update

The occupational health and safety regulation review is expected to be completed late in 2001.

Representatives from industry, government and labour organizations have almost completed reviewing regulations governing explosives, noise, chemical hazards, mine safety, radiation and ventilation, and the *General Safety Regulation of the Occupational Health and Safety Act*.

For the review process, a task force was set up for each regulation. The task force identified issues and drafted proposals for a revised regulation. Drafts have been made available for stakeholder and public scrutiny and comment. All comments received have been considered before a draft is finalized.

The latest discussion papers and proposals for the regulations mentioned below are posted for review and comment on the Workplace Health and Safety Web site: [www.whs.gov.ab.ca](http://www.whs.gov.ab.ca).

For more information, call (780) 427-2687, or for a toll-free connection, dial 310-0000.

- **General Safety Regulation**
- **Chemical Hazards Regulation**
- **Mines Safety Regulation**

Draft proposals have been completed and stakeholder comments are now being reviewed.

- **Alberta Joint Work Site Health and Safety Committee (JWSHSC) Regulation**

The review of stakeholder comments has been completed and results will be presented to the Council on Workplace Safety.

- **Explosives Safety Regulation**
- **Ventilation Regulation**
- **Noise Regulation**
- **General Safety Regulation — safety requirements for fall protection for roofers**

Public consultations have been completed.

- **Radiation Health Administration Regulation (under the *Government Organization Act*)**

The review of stakeholder comments has been completed.

- **General Safety Regulation — safety requirements for electrical and communication workers**

The draft proposal is now available for public consultation at [www.gov.ab.ca/lab/new/review/elecworker.html](http://www.gov.ab.ca/lab/new/review/elecworker.html)

## Courses & Training

### PITS expands hydrocarbon gas hazards course

This one-day course is now called Detection and Control of Flammable Substances. Developed by the Petroleum Industry Training Service, the course will be franchised. The focus of the course is on the detection and control of flammable substances and is applicable to anyone working with or near hydrocarbon gases and flammable fluids. Students receive a certificate of completion after passing a written examination.

#### Calgary

April 6

May 11

November 16

#### Nisku

April 20

May 18

November 23

or on demand when sufficient interest is shown

For more information, contact Jim Shaffer

☎(780) 955-6006 or

✉jshaffer@pits.ca

### Alberta Municipal Health and Safety Association

New courses from the Alberta Municipal Health and Safety Association available to full and associate AMHSA members:

#### Musculoskeletal Injury Prevention Program (MIPP)

- A one-day course to help workers understand and identify job demands that can lead to musculoskeletal injuries and their effects on the body. Participants will learn ways to eliminate or control risk factors.

#### Overview of Health and Safety Programs for Managers/Supervisors/Councillors

- Learn the necessity of managing health and safety, and the critical role that management plays in the process. The course will review responsibilities of all workplace parties and the eight elements of a basic health and safety program.

#### Road Grader and Front-End Loader Operator Safety courses

- These are separate one-day courses. Each course trains operators to operate the equipment safely. Instruction combines classroom theory with hands-on practice on the equipment.

For information on dates and locations of upcoming courses, or to arrange a course on site, contact Lorraine:

☎(780) 955-3701 or

☎(800) 267-9764

More course information is available on the AMHSA Web site, [www.amhsa.ca](http://www.amhsa.ca)

## Workplace Fatalities

*Occupational Health & Safety Magazine* publishes Workplace Fatalities to remind readers of the importance of workplace health and safety. The information is not a final investigation report. In many cases investigations are continuing. Final investigation reports are filed at the Alberta Human Resources and Employment Library and can be reviewed there or on the Workplace Health and Safety Web site at [www.whs.gov.ab.ca](http://www.whs.gov.ab.ca) under Fatality Reports.

An occupational fatality refers to the death of a worker caused by a work-related incident or exposure.

To protect personal privacy, the fatality descriptions do not include the names of the deceased.

### Work-related incident fatalities July – October 2000

Most work-related incident fatalities that fall under provincial jurisdiction are investigated by Workplace Health and Safety. In general, highway traffic, farm, disease or heart attack fatalities are not investigated.

The following fatalities have been or are being investigated.

A 52-year-old truck driver had just finished delivering asphalt to a paving crew. He pulled his end-dump truck off the highway and onto a lane to empty residual asphalt from the dump box. When he raised the box, it contacted a 25-kilovolt overhead power line. The electricity arced and travelled through the tires to the ground. As a result, the tires caught on fire. A co-worker outside the truck alerted the driver, who stepped off the truck. He was electrocuted when he touched the ground.

A 37-year-old worker was engaged in clean-up operations at a burned-out warehouse. Just over five metres away, a skid steer-loader operator was using the loader to remove a damaged gas meter guard. In the process, a cross brace broke off the meter and flew through the air, striking the worker in the head. The man died six days later from his injuries.

A 29-year-old vacuum-truck operator died in an explosion which occurred inside a pressure vessel. The operator was partway into the access (manway) of the vessel when the explosion occurred. The force of the blast propelled the operator backward into some gas piping and caused fatal injuries. The explosion was caused when an undetermined source ignited a residue of sweet gas in the vessel.

A 32-year-old labourer was using an acetylene torch to cut an old auto frame apart for salvage. The worker collapsed on the torch and suffered fatal burns. While the investigation determined the worker had a known medical condition, it could not confirm this caused the man's collapse.

A 45-year-old welder was on top of a load of steel tubes on a trailer, moving several loose tubes onto the forks of a fork lift, when he fell to the ground. One of the loose tubes fell from the trailer and struck the man's head. He died of his injuries almost immediately.

In a fabrication shop, a 24-year-old labourer was crushed between a truck frame and bale deck when the bale deck was lowered during the testing and adjustment of the hydraulics. The bale deck is a platform attached to a truck used to load and unload hay bales.

A 25-year-old slasher was killed when a tree, partially felled by a beaver but snagged on a standing tree, fell and struck him. The snagged tree was freed when the slasher cut down the standing tree. He was clearing a seismic line.

Two tire service technicians were mounting a 60-centimetre-rim tire onto a grader. To seal the tire onto the rim, they started to inflate the tire. There was an explosion of air inside the tire, and the rim components and tire blew off the grader. The rim components struck both workers. One worker received minor injuries and the other, a 23-year-old, was killed. The cause of the explosion is not known.

A driver was backing up a flatbed trailer-truck loaded with a manifold shack when a 54-year-old derrickhand walked into the truck's path and was run over.

A 32-year-old driller working on an oil rig was struck by a 12-kilogram piece of pipe brace when it fell 33 metres from the top of the derrick. The pipe was struck off the derrick by the travelling block – the mechanism that pulls the drilling pipe up and down the height of the rig – when the block went too high. The driller was running from the work platform when he was hit. The pipe struck his hard hat, puncturing it and injuring his head.

### Occupational disease fatalities accepted July – October 2000

Disease fatalities represent claims that have been accepted by the Workers' Compensation Board (WCB) – Alberta for compensation. They are counted in the year they are accepted.

The following fatalities resulted from exposure to asbestos.

Claims were accepted for:

Two insulators, 57 and 71 years old, who were exposed to asbestos insulation products.

A 70-year-old firefighter, who was exposed to asbestos insulation during his 14-year employment.

A 62-year-old, who worked for 30 years as a welder, was exposed to asbestos fibres from various sources, including asbestos fire blankets and grinding wheels.

A 79-year-old pipefitter, who worked in mines in the late 1930s and then at gas plants and oil refineries until his retirement. He was exposed to asbestos, coal, solvents, plastics and fumes during his employment.

ISSN 0705-6052 © 2001

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